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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

Subject: EPA Reg. No. 352-446. Harmony herbicide (DPX-M6316). Request for Increase in Use Rate. Branch No. 7582. No MRID Number. DP Barcode D160588

From: Clyde T. Stanton, Chemist
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Thru: Andrew Rathman, Section Head
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To: Robert Taylor, PM-25
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The E.I. du Pont de Nemours and Company, Inc. has submitted an application for an amended registration for Harmony® Herbicide [DPX-M6316; methyl 3-((((4-methoxy -6-methyl-1,3,5-triazin-2-yl)amino)carbonyl)amino) sulfonyl-2 thiophene carboxylate] (EPA Reg. No. 352-446) to allow for an increase in use rate. Tolerances have been established for wheat and barley grain at 0.05 ppm, wheat and barley straw at and 0.1 ppm, and for soybeans at 0.1 ppm (40 CFR 180.439). DEB recommended for this registration and tolerance 5/3/88 (C. Deyrup, DEB Nos. 3721, 3722, 3682).

Proposed Use

The proposed label would provide for sequential applications allowing up to 1.0 oz product/A (0.75 oz a.i./A). The current label restricts Harmony use to a single application of up to 2/3 oz product/A/year (0.5 oz a.i./A). It is noted in the registrant's request they indicate current label provides for sequential application of up to 2/3 oz product/A (0.5 oz a.i./A). The first application may not be made until winter wheat is in the 2-leaf stage and the final application must be made before the 3rd node is detectable. The first application to spring wheat or barley may not be made until the plant is in the 2-leaf stage and the last

application must be made before the 1st node is detectable. Application timings agree with those approved by DEB in the original petition (C. Deyrup 5/3/88).

Residue Data

The registrant cites residue data from studies performed in support of the original registration effort (DuPont Report No. AMR 870-87, EPA MRID No. 40340316; DuPont Report No. AMR 870-87 Supplement 1, EPA MRID No. 40487504). These data may be found in PP#6F3431. Results of nineteen (19) tests on wheat grain and straw with application rates of 0.24-4.0 oz a.i./A from a single application and PHI's of 41-129 days showed no detectable residue above the tolerance level limit. Results of sixteen (16) tests on barley grain and straw with application rates of 0.33-2.0 oz a.i./A for PHI's of 49-116 days showed no detectable residue above the lower limit of quantitation (0.02 ppm) with the exception of one grain test. This test was conducted with application rates of 0.33 and 1.25 oz a.i./A for a PHI of 49 days. The higher limit of quantitation (0.05 ppm) was due to the presence of green kernels creating greater chromatographic interference. Since the residue levels were non-detectable, they can still be considered below the established tolerance.

A PHI of 55-65 days following the first node detectable stage for spring wheat grown in Minnesota can be estimated from a report available from the Agricultural Extension Service of the University of Minnesota (AG-FO-2547). The time interval available for application is estimated to be 20 days (second leaf stage up to first node detectable). Residue data submitted by the registrant in support of the proposed label change showed approximately 32% of the samples (wheat and barley) were obtained for PHI's in the 55-65 day range covering use rates of 0.24-2.0 oz a.i./A. All tests with the above noted exception resulted in non-detectable residues for levels of quantitation of 0.02 and 0.05 ppm for barley and wheat grain and barley and wheat straw, respectively.

EAB has reported triazine-type herbicides similar to DPX-M6316 have an appreciable potential for leaching into groundwater and have a 6-8 month half-life (T. Dougherty 9/22/87).

Conclusions and Recommendations

There exists the potential for increased buildup of parent and metabolic compounds in soil and groundwater resulting from the proposed modification of the use rate. RD may want to determine whether EFED has any concerns over the proposed increase.

Residues in wheat and barley grain and straw are not expected to exceed the established tolerance as a result of increased

application rate for Harmony® herbicide. Therefore CBRS has no objection to the proposed amended registration to increase the use rate to 0.75 oz a.i./A/year.

cc: CLOlinger (CBRS), Circulate, RF, SF, Amended Reg. File, RDSchmitt, C. Furlow (PIB/FOD)
H7509C:CBRS:CLOlinger:clo:CM#2:Rm 803C:557-1406: 6/04/91
RDI: ARRathman: 6/04/91 EZager: 6/04/91